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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/899,632	07/05/2001	John Philip Bolash	2001-0511	5129

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LEXMARK INTERNATIONAL, INC.
INTELLECTUAL PROPERTY LAW DEPARTMENT
740 WEST NEW CIRCLE ROAD
BLDG. 082-1
LEXINGTON, KY 40550-0999

EXAMINER

STOCK JR, GORDON J

ART UNIT PAPER NUMBER

2877

DATE MAILED: 01/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/899,632

Applicant(s)

BOLASH ET AL.

Examiner

Gordon J Stock

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/20/03.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22 and 25 is/are allowed.
- 6) ☒ Claim(s) 1-15, 17-20, 23 and 24 is/are rejected.
- 7) ☒ Claim(s) 16 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. The amendment received on October 20, 2003 has been entered into the file.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claims 2-4, 7-9, 23, and 24** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "DO to D1"/"DO to an amount D1" in **claims 2, 7, 23, and 24** is a relative term which renders the claim indefinite. The term "DO to D1"/"DO to an amount D1" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. "DO to D1"/"DO to an amount D1" renders the degree of light strength signal increase indefinite. **Claims 3-4, 8, and 9** are rejected for depending upon rejected base claims.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. **Claims 1, 5, 6, 10-13, 18-20** are rejected under 35 U.S.C. 102(e) as being anticipated by **Walker et al. (6,561,643)**.

As for **claims 1, 5, 6, 10-13, 18-20**, Walker discloses in an advanced media determination system for inkjet printing: a media type detector comprising: a light source; a specular light sensor, a first light sensor, wherein the first light sensor has a higher light flux capability compared to the specular light sensor; and a determination unit to determine a media type based on a signal ratio of a detected specular light sensor intensity and a detected first light sensor intensity; whereas, gloss is measured; wherein an aperture, a field stop, accomplishes the higher flux capability and the field stop of the specular light sensor is smaller than the aperture of the first light sensor (Figs. 21 and 29; col. 28, lines 45-67; col. 29, lines 1-45; col. 36, lines 1-67). Figure 21 suggests that the sensors and the light source are at approximately equal radii. As for measuring a plurality of intensities, Figure 21 shows many light beams entering the two sensors. The measuring is performed prior to a picking of the media (Figs. 25-29).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claim 14** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Walker et al. (6,561,643)** in view of **Snail (4,815,858)** and **Howarth (4,319,847)**.

As for **claim 14**, Walker discloses everything as above (see claim 13). In addition, Figure 21 has the sensors comprising semicircular cavities. Both Snail and Howarth teach a

semicircular arrangement for reflectometry and measuring properties of a sheet (Fig. 2 of Snail; Fig. 2 of Howarth). Therefore, it would be obvious to one skilled in the art to have the detector comprise a semicircular cavity, for semicircular cavities are used in reflectometry and measuring properties of sheets.

8. **Claims 15 and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Walker et al. (6,561,643)** in view of **Howarth (4,319,847)** and **Hashimoto (5,764,251)**.

As for **claims 15 and 17**, Walker discloses a specular light sensor; a first light sensor, wherein the first light sensor has a higher flux capability compared to the specular light sensor, a signal ratio of a detected specular light sensor intensity and the detected first light sensor signal is determinative of a media type of the media; an aperture of the first light sensor is larger than the aperture of the specular light sensor (Figs. 21 and 29; col. 28, lines 45-67; col. 29, lines 1-45; col. 36, lines 1-67). As for a linear characteristic range of the sensor, Walker is silent. Howarth teaches that for measuring characteristics of media proper selection of the spectral response of the detector must be accomplished (col. 3, lines 35-40). Hashimoto in a medium discriminating device teaches that a detector's type of linear response is characteristic of a medium (Fig. 3). Therefore, it would be obvious to one skilled in the art the signal's intensity would fall within a linear characteristic range of the light sensor, for media produce differing linear signal responses upon illumination.

Allowable Subject Matter

9. **Claims 2-4, 7-9, 23, and 24** would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 16 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 22 and 25 are allowed.

As to **claim 2**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a media manipulation apparatus “wherein, if a signal of said detected first light sensor intensity falls within the non-linear region of the sensor characteristic curve of the first light sensor, the determination bases the media type determination on the detected specular light sensor intensity, the first light sensor signal detected after said detected first light intensity, and a ratio,” in combination with the rest of the limitations of **claims 2-4**.

As to **claim 7**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a media manipulation apparatus “wherein, if a signal of said detected first light sensor intensity falls within the non-linear region of the sensor characteristic curve of the first light sensor, the determination bases the media type determination on the detected specular light sensor intensity, the first light sensor signal detected after said detected first light intensity, and a ratio,” in combination with the rest of the limitations of **claims 7-9**.

As to **claim 16**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a media type detector “if the detected first light sensor signal does not fall within the linear characteristic range of the first light sensor, to control an increasing of a strength of a light source performing the illumination of the media until a signal of the first light sensor detected, after said detection of the first light sensor intensity, either falls within the linear

characteristic range of the first light sensor or the strength of the light source reaches a maximum,” in combination with the rest of the limitations of **claim 16**.

As to **claim 21**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a media type detection method “basing the determination of the media type on an extrapolation of the first light sensor intensity by projecting a signal representative of the first light sensor intensity onto a linear region of a characteristic curve of the first light sensor and by determining a signal ratio of the specular light sensor intensity and the projected first light sensor signal, if it is determined that the first light sensor signal falls within a non-linear region of the first light sensor characteristic curve,” in combination with the rest of the limitations of **claim 21**.

As to **claim 22**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a media type detection method determining if one of the first and second light intensities does not fall within a linear region of a characteristic curve of a light sensor, in combination with the rest of the limitations of **claims 22-25**.

Response to Arguments

10. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Fax/Telephone Numbers

If the applicant wishes to send a fax dealing with either a proposed amendment or a discussion with a phone interview, then the fax should:

- 1) Contain either a statement “DRAFT” or “PROPOSED AMENDMENT” on the fax cover sheet; and
- 2) Should be unsigned by the attorney or agent.

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This will ensure that it will not be entered into the case and will be forwarded to the examiner as quickly as possible.

Papers related to the application may be submitted to Group 2800 by Fax transmission. Papers should be faxed to Group 2800 via the PTO Fax machine located in Crystal Plaza 4. The form of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CP4 Fax Machine number is: (703) 872-9306

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gordon J. Stock whose telephone number is (703) 305-4787.

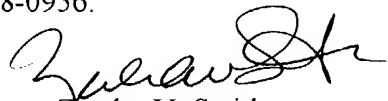
The examiner can normally be reached on Monday-Friday, 10:00 a.m. - 6:30 p.m.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



gs

January 11, 2004



Zandra V. Smith
Primary Examiner
Art Unit 2877